

**REMARKS**

Applicants thank Examiner Horlick for conducting a very useful telephonic interview on June 12, 2007, and for suggesting amendments that would place the claims in condition for allowance. Applicants have taken these suggestions into account in amending the claims.

I. The sole grounds of rejection remaining in the present application are three rejections under 35 U.S.C. 112, second paragraph. Applicants disagree with those rejections for the following reasons:

1. the term "if the target comprises a mismatch." Applicants do not understand why this term is alleged to be vague and indefinite. The claimed method is for detecting a mismatch in a test double stranded nucleic acid target. The claimed method will only detect a mismatch if the target comprises a mismatch. Nevertheless, in the interest of expediting prosecution, claims 1, 7, 14 and 28 have been amended to delete the recitation, "if the target comprises a mismatch." The amendments are fully supported in the specification, do not add new matter, and do not narrow the scope of the claims.
2. the term "predominant site." The meaning of "predominant" is clear to one of skill in the art. For example, the Random House Dictionary indicates that one definition for this term is "prevailing, preponderant" (copy of dictionary page attached). The Merriam-Webster On-Line Dictionary indicates that one definition of prevalent is "most frequent or common" (copy of dictionary page attached). Transposition at a predominant site, in a method of the invention, results in the production of a "predominant" band on a separating gel. Typical predominant bands are shown in Figure 1B. As this figure is described in the specification (*e.g.* on page 11, lines 5-7), "When the target DNA contained a single base pair mismatch, insertions to the normal duplex sites were suppressed and nearly 90 % of the strand transfer products were either 91 nt- or 92 nt-long (Fig. 1B, lane 3)." Other predominant bands are shown in Figure 1C, lanes 3 and 4. As described in the Brief Description of this figure, "the predominant bands in lane 3 and 4

correspond to 35 and 36 nt, respectively." Applicants do not see a need to place a quantitative value on "predominant."

3. the term "under effective conditions." Conditions that are effective for a Mu-end nucleic acid to transpose into a target at about the site of a mismatch, if the target comprises a mismatch, can be determined empirically. In view of the disclosure in the present application of the claimed method, it would not require undue experimentation for a skilled worker to optimize such reaction conditions. Typical such conditions are described in the specification, *e.g.* on page 23, line 19-26 and in the Savilahti *et al* reference mentioned therein.

Applicants disagree with the suggestion by Examiner Horlick in the telephonic interview of June 12, 2007 that certain other language in the claims was unclear. Nevertheless, minor amendments have been made to the claims as suggested by Examiner Horlick. The amendments are fully supported in the specification, do not add new matter, and do not narrow the scope of the claims.

II. Rejoinder

Applicants once again request that claim 32 (from Group II, directed to an *in vitro* reaction mixture present during the performance of the claimed method) and claims 33-35 (Group III, directed to a kit used for performing the method) be rejoined to claims 1-31, once these claims have been deemed allowable, pursuant to the *In re Ochiai*, 37 USPQ 2d 1127 (Fed. Cir. 1995) and *In re Brouwer*, 37 USPQ2d 1663 (Fed. Cir. 1996) decisions, and MPEP 821.04. The *in vitro* reaction mixture of claim 32 has presumably already been searched during the search of claims 1-31, as have the components of the kit of claims 1-31. Therefore, no additional search needs to be performed, so there is no search burden upon the Examiner. The scope of claims 32-35 is not greater than the scope of claims 1-31.

In view of the preceding arguments and amendments, it is believed that the application is in condition for allowance, which action is respectfully requested.

No fee is believed to be due with this response. However, the Commissioner is hereby authorized to charge any fees association with this response or credit any overpayment to Deposit Account No. 22-0261, citing Docket No. 31978-201641.

Respectfully submitted,

Date: June 19, 2007

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*esp. Biol.*, **pre-da-ceous**, [**PRED(ATORY)** + **-aceous**], —**pre-da-cious-ness**, **pre-dac-i-ty** (*pri das'ē tē*); *esp. Biol.*, **pre-da-ceous-ness**, *n.*

**pre-date** (*prē dāt'*), *v.t.*, **-date-d**, **-dat-ing**. 1. to date before the actual time; antedate. 2. to precede in date. **pre-dation** (*prē dā'shān*), *n.* 1. the act of plundering or robbing. 2. predatory behavior. 3. a relation between animals in which one organism captures and feeds on others. [< *L prædātiōn-* (*s.* of *prædātiō*) a taking of booty, plundering. See **PREDATORY**, -*ION*]

**pre-dā-tor** (*prē dā'tōr*), *n.* 1. a predatory person, organism, or thing. [< *L prædātor* plunderer = *prædātōr* (pptr. of *prædātō* to plunder *< præda* PREY) + *-tor* *-ATOR*]  
2. **preda-to-ry** (*prē dā'tōrē*, *-ērē*), *adj.* 1. of, pertaining to, or characterized by, plunder, exploitation, etc. 2. living by plunder, exploitation, etc. 3. *Zool.* habitually preying upon other animals. [< *L prædātōrīs* (*us*)] —**pred-a-to-ri-ly**, *adv.* —**pred-a-to-ri-ness**, *n.* —**Syn.** 1, 2. rapacious.

**pre-dawn** (*prē dōn'*, *prē dōn*), *n.* 1. the period immediately preceding dawn. —*adj.* 2. of or pertaining to the time immediately prior to dawn.

**pre-de-cause** (*prē dī sēs'*), *v.t.*, **-caused**, **-caus-ing**. to die before (another person, an event, etc.).

**pre-de-ces-sor** (*prē dī'sēs'or* or, *esp. Brit.*, *prē dī'sēs'or*), *n.* 1. a person who precedes another in an office, position, etc. 2. someone who succeeded or replaced by something else. 3. *Archic.* an ancestor; forefather. [*ME predecesour* < AF < LL *praedecessor* = *L præ-* PRE- + *dēcessor* retiring official (*dēcessus* (*us*)) retired (pptr. of *dēcedere* to withdraw; see **DE-CEPSE**, *CEPSE*)] —**pre-de-ces-sor-ial**, *adj.*

**pre-de-sti-nar-i-an** (*prē dīs'ētē nārē ēn*), *adj.* 1. of or pertaining to predestination. 2. believing in predestination. [*PREDESTIN(A)TION* + *ARIAN*] —**pre-de-sti-nar-i-ism**, *n.*

**pre-de-sti-nate** (*prē dīs'ētē nāt'*), *adj.* **pre-de-sti-nat', *n.* 1. *Theol.* to foreordain or predestine by divine decree or purpose. 2. *Obs.* to predetermine. —*adv.* 3. predestined; foreordained. [*ME predestinātūs* (*us*), pptr. of *predestināre* to appoint beforehand] —**pre-de-sti-nat-ely**, *adv.***

**pre-de-sti-na-tion** (*prē dīs'ētē nāshān*, *prē dīs'ēs*), *n.* 1. the act of predestinating or predestining. 2. the state of being predestinated or predestined. 3. fate; destiny. 4. *Theol.* the foreordination by God of whatever comes to pass, esp. the salvation and damnation of souls. Cf. *election* (def. 4). [*ME predestinātiōn* < LL *praedestinātiōn-* (*s.* of *predestinātūs*)]

**pre-de-sti-nine** (*prē dīs'ētēnē*), *v.t.*, **-tined**, **-tin-ing**. to destine in advance; foreordain; predetermine; *He was predestined for success*. [*ME predestinē* (*n*) < *L praedestināre*] —**pre-de-sti-na-ble**, *adj.*

**pre-de-ter-mina-tion** (*prē dītūrē mēnē shān*, *prē dītūrē mēn'*), *n.* 1. pre-determined beforehand; predetermined. —**pre-de-ter-min-ately**, *adv.*

**pre-de-ter-mine** (*prē dītūrē minē*), *v.t.*, **-mined**, **-min-ing**. to settle or decide in advance; *He had predetermined his answer to the offer*. 2. to foreordain; predestine. —**pre-de-ter-mi-na-tion**, *n.* —**pre-de-ter-mina-tive** (*prē dītūrē mātīvē*, *prē dītūrē mātīv'*), *adj.* —**pre-de-ter-mina-tor**, *n.*

**pre-di-ca-ble** (*prē dīkā bəl*), *adj.* 1. that may be predicated. —*n.* 2. that which may be predicated; an attribute. 3. *Logic*. any one of the various kinds of predicate that may be used of a subject. [< *ML praedicabili(s)* assertable, *L*: praiseworthy = *praedicabili* (*re*) to declare publicly (see **PRAEACH**) + *-bili* *-BLE*] —**pre-di-ca-bil-i-ty**, *pre-di-ca-bil-ness*, *n.* —**pre-di-ca-bly**, *adv.*

**pre-di-ca-ment** (*prē dīkā'mēnt*), *n.* 1. an unpleasantly difficult, perplexing, or dangerous situation. 2. a class or category of logical or philosophical predication. 3. *Archic.* a particular state, condition, or situation. [*ME predicamentum* (*um*) something predicated, asserted < *praedicare*. See **PREDICATE**, *PRE-<sup>1</sup>dic-<sup>2</sup>ment*] —**pre-di-ca-men-tal** (*prē dīkā'mēntāl*), *adj.* —**Syn.** 1. **PREDICAMENT**, **PLIGHT**, **DILEMMA**, **QUANDARY** refer to unpleasant or puzzling situations. **PREDICAMENT** and **PLIGHT** stress more the unpleasant nature; **DILEMMA** and **QUANDARY** the puzzling nature of the situation. **PREDICAMENT**, though capable of being used lightly, may also refer to a really crucial situation: *Stranded in a strange city without money, he was in a predicament*. **PLIGHT**, however, though originally meaning peril or danger, is seldom used today except lightly: *When his suit failed to come back from the cleaners, he was in a terrible plight*. **DILEMMA** means a position of doubt or perplexity in which a person is faced by two equally undesirable alternatives; *the dilemma of a person who must support one of two friends in an election*. **QUANDARY** is the state of mental perplexity of one faced with a difficult situation: *There seemed to be no way out of the quandary*.

**pre-di-can-t** (*prē dīkānt*), *adj.* 1. preaching; a *predicant* (*s.* of *praedicāns*) preaching. See **PRAEACH**, *-ANT*]

**pre-di-cate** (*prē dīkāt'* *kat'*; *adj.* *n.* *pre-di-kāt*), *v.t.*, **-cat-ed**, **-cat-ing**, *adj.* —*n.* **-cat-er**. 1. to proclaim; declare; affirm; assert. 2. *Logic*. a. to affirm or assert (something) of the subject of a proposition. b. to make (a term) the predicate of such a proposition. 3. to connote; imply. 4. to found (a statement, action, etc.) *base* (usually fol. by *on*): *He predicated his behavior on his faith in humanity*. —*v.i.* 5. to make an affirmation or assertion. —*adj.* 6. predicated. 7. *Gram.* belonging to the predicate; a *predicate noun*. 8. *n.* (In many languages, as English) a syntactic unit that functions as one of the two main constituents of a simple sentence, the other being the subject, and that consists of a verb and of all the words governed by the verb or modifying it, the whole often expressing the action performed by or the state attributed to the subject, as *is here* *in Larry is here*. 9. *Logic*. that which is affirmed or denied.

*-Dan-te-an*, *adj.* *pre-de-sig-na-tion*, *n.*

*-Dar-win-i-an*, *adj.* *pre-de-ig-nos-tic*, *adj.*

*-dem-o-crat-ic*, *adj.* *pre-di-li-u-vis-ital*, *adj.*

*-de-pre-sion*, *adj.* *pre-di-rect*, *r.t.*

*-de-sig-nat-e*, *v.t.* *pre-di-solve*, *r.t.*, *-solved*,

concerning the subject of a proposition. [*< L *praedicti*(us) pp. of *praedicere* to declare publicly, assert — *pra-* PRE- + *-dicare*, comb. form of *dicere* to say, make known; see *-ATE!* — *praedicti*-a-tion, n. — *praedicti*-a-tion-al, adj. — *praedicti*-a-tive, adj. — *praedicti*-a-tive-ly, adv.]*

**pred/icate ad'jective**, Gram. an adjective used in the predicate, esp. with a copulative verb and modifying the subject, as *dead* in *He is dead*, or the direct object, as *sick* in *It made him sick*.

**pred/icate nom'native**, (in Latin, Greek, and certain other languages) a predicate noun or adjective in the nominative case.

**pred/icate noun'**, Gram. a noun used in the predicate with a copulative verb and having the same referent as the subject, as *king* in *He is the king*.

**pred/icate objective**, Gram. See objective complement.

**pred-i-ca-to-ry** (pred'i kə tōr'ē, -tōr'ē), adj. of or pertaining to preaching. [*< eccl. L *praedictori*(us) of preaching. See PREACH, -ORY']*

**pred-ict** (pri dikt'), v.t. 1. to tell in advance; prophesy. —*r.i.* 2. to foretell the future; make a prediction. [*< L *praedictus*, pp. of *praedicere* to foretell — *pra-* PRE- + *-dicere* to say; see DICTUM*] —*pred-icti*-a-bil'i-ty, n. —*pred-icti-ble, adj.* —*pred-icti/a-ble, adj.* —*pred-ictor, n.* —*Syn. 1, 2. divine, augur, prognosticate, portend. PREDICT, PROPHESY, FORESEE, FORECAST mean to know or tell (usually correctly) beforehand what will happen. To PREDICT is usually to foretell with precision of calculation, knowledge, or shrewd inference from facts or experience: Astronomers can predict an eclipse; it may, however, be used quite lightly: I predict she'll be a success at the party. PROPHESY may have the solemn meaning of predicting future events by the aid of divine or supernatural inspiration: The sibyl prophesied victory; this verb, too, may be used loosely: I prophesy he'll be back in the old job. To FORESEE refers specifically not to the uttering of predictions but to the mental act of seeing ahead; there is often (but not always) a practical implication of preparing for what will happen: He could foresee their objections. FORECAST has much the same meaning as FORESEE, except that conjecture rather than real insight or knowledge may be involved, and that such conjecture is publicly announced. It has the same meaning as PREDICT when referring to the weather: Rain and snow are forecast for tonight.*

**pred-i-cition** (pri dik'shən), n. 1. act of predicting. 2. an instance of this; prophecy. [*< L *praedicti*-on- (s. of *praedicti*) a foretelling*] —*Syn. 2. forecast, augury, prognostication, divination.*

**pred-i-citive** (pri dikt'iv), adj. 1. of or pertaining to prediction. 2. being an indication of the future or of future conditions; a *cold wind predictive of snow*. [*< LL *praedicti*-vus* foretelling] —*pred-i-citive-ly, adv.* —*pred-i-citive-ness, n.*

**pred-i-cot-ry** (pri dik'tōrē), adj. *Archaic.* predictive.

**pred-i-gest** (pri dješt', -dži), v.t. to treat (food) by an artificial process analogous to digestion to facilitate digestion by the body. —*pred-i-ge-stion, n.*

**pred-i-lec-tion** (pred'lek'shən, prēd'-), n. a tendency to think favorably of something; partiality. [*< ML *praedilecti*(us) beloved, pp. of *praedilecti* to prefer (see PRE-  
DILIGENT) + -iōnē*] —*Syn. bias, inclination, liking.*

**pre-dis-pose** (pri di spōz'), v.t. —*posed, -pos-ing.* —*r.i. 1. to give an inclination or tendency to beforehand. 2. to render subject, susceptible, or liable. 3. to dispose beforehand. 4. *Archaic.* to dispose of beforehand, as in a will, legacy, or the like. —*r.i. 5. to give or furnish a tendency or inclination; a job that predisposes to lung infection.* —*pre-dis-pos'i-ble, adj.* —*pre-dis-pos-ed-ly* (pri di spōzid lē, -spōzd'), adv. —*pre-dis-pos-ed-ness, n.* —*Syn. 1. pre-arrange, prepare. 3. bias, incline.**

**pre-dis-po-si-tion** (pri dis'pə zish'ən, pri dis'-), n. the condition of being predisposed; a *predisposition to think optimistically*. —*pre-dis-po-si-tion-al, adj.*

**pre-dom-i-nance** (pri dom'i nans), n. the state, condition, or quality of being predominant. Also, *pre-dom'i-nan-cy*. [*PREDOMINANT* + *-ANCE*]

**pre-dom-i-nant** (pri dom'i nənt), adj. 1. having ascendancy, power, or influence over others; ascendant. 2. prevailing; prominent: *Green is the predominant color of leafage*. [*< ML *praedominant*- (s. of *praedomināns*) predominating, pp. of *praedomināri* to predominate*] —*pre-dom'i-nantly, adv.* —*Syn. See dominant.*

**pre-dom-i-nate** (pri dom'i nāt'), v.t. —*nated, -nat-ing.* —*r.i. 1. to be the stronger or leading element; preponderate; prevail: The radicals might predominate in the government. 2. to have or exert controlling power (often fol. by over): Good sense predominated over his fear. 3. to surpass others in authority or influence: a poet who predominated. —*r.i. 4. to dominate or prevail over.* [*< ML *praedomināti*(us) pp. of *praedomināri* to predominate*] —*pre-dom'i-nate-ly* (pri dom'i nāt lē), adv. —*pre-dom'i-nat-ing-ly, adv.* —*pre-dom'i-na-tion, n.* —*pre-dom'i-na-tor, n.* —*Syn. 1. outweigh. 2. overrule, dominate.**

**pre-dy-na-mic** (pri'dē nām'ik), adj. of, pertaining to, or belonging to a time or period before the first dynasty of a nation, esp. the period in Egypt before c3200 B.C.

**pre-e (pri'ē)**, v.t., preed, preeing. 1. *Scot. and North Eng.* to try, test, or taste. 2. *pree the mouth of, Scot.* to kiss. [shortened form of *prete*, collateral form of *PROVE*]

**pre-e-lec-tion** (pri'ē lek'shən), n. 1. a choice or selection made beforehand. —*adj.* 2. coming before an election: *prelection primaries*. Also, *pre-elec-tion, pre'sēlec-tion*.

**pre-e-mie** (pri'mē), n. *Informal.* a premature infant. Also, *premie*, (shortening and alter. of *PREMATURE*)

**pre-em-i-nence** (pri em'i nəns), n. the state or character of being preeminent in quality, rank, influence, etc. Also, *pre-em'i-nence, pre-em'i-nence*. [*ME < LL *praetinentia**]

**pre-dis-tin'guish**, r.t.

**pre-dis-tress**, n., r.t.

**pre-di-vide**, r.t., *vid-ed*, *vid-ing*.

**pre-di/vi'sion**, n.

**pre-Dor'ic**, adj.

**pre-East'er**, n.

**pre-ef'fort**, n.

**pre-e-lec'tric**, adj.

**pre-e-lec'tri-cal**, adj.

## predominant

One entry found for **predominant**.

Main Entry: **pre·dom·i·nant** ⓘ

Pronunciation: -n&nt

Function: *adjective*

Etymology: Middle French, from Medieval Latin *praedominant-*, *praedominans*, present participle of *praedominari* to predominate, from Latin *prae-* + *dominari* to rule, govern -- more at **DOMINATE**

**1** : having superior strength, influence, or authority : **PREVAILING**

**2** : being most frequent or common

**synonym** see **DOMINANT**